REMARKS

Claims 1 and 15 are canceled. Claims 2, 3, 6-8, 11, 12, 16, 17, 19-22, 25-27, 31, 34, 37, 40, 48-49 and 59-60 have been amended to be made dependent on non-canceled claims. No new matter has been added.

Responsive to the action mailed September 27, 2002, Applicants elect the invention of Group 1, claims 1-14, drawn to nucleic acids. In response to the species election requirement, Applicants elect the species of: "loss of myofibers and loss of regenerative capacity in aging." Applicants note that the elected species is a specific, well known disease state.

The election is made with traverse, at least with regard to Groups I, II, VI, VII, VIII, IX, XIII, XIV, XV and XVI, for the following reasons.

The present application is a U.S. National Stage application of PCT/AU99/00220. As such, a restriction in this application must be governed by PCT Rule 13 regarding unity of invention, not by U.S. rules regarding patentable distinction (See MPEP §1850). Under PCT Rule 13, unity of invention exists when there is a technical relationship among the claimed inventions involving one or more of the same or corresponding special technical features. Special technical features are those technical features that define the contribution that the invention, as a whole, makes over the prior art. Upon entry of the present amendment, at least the claims encompassed by Groups I, II, VI, VII, VIII, IX, XIII, XIV, XV and XVI are interrelated by the special technical feature of molecules having a structural relationship to a novel protein (SEQ ID NO:2) or the nucleic acid that encodes the protein. Accordingly, at least Groups I, II, VI, VII, VIII, IX, XIII, XIV, XV and XVI satisfy the requirements of unity under PCT Rule 13.

In light of the present amendments and discussion, Applicants respectfully request that the present restriction requirement be withdrawn and at least the claims of Groups I, II, VI, VII, VIII, IX, XIII, XIV, XV and XVI be examined together in the present application.

A marked-up copy of the amended claims showing the changes made is attached. Please apply any charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: 26 March 2003

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Version with Markings to Show Changes Made

The application has been amended as follows:

In the claims:

Claims 1 and 15 are canceled.

Claims 2, 3, 6-8, 11, 12, 16, 17, 19-22, 25-27, 31, 34, 37, 40, 48-49 and 59-60 have been amended as follows.

2. (Amended) An isolated nucleic acid molecule [according to claim 1 wherein said] encoding a protein that comprises the amino acid sequence substantially as set forth in SEQ ID NO:2 or a derivative, homolog or mimetic thereof or having at least about 45% or greater similarity to SEQ ID NO:2 or a derivative, homolog, analog, chemical equivalent or mimetic of said nucleic acid molecule.

3. (Amended) An isolated nucleic acid molecule according to claim [1] 2 comprising a nucleotide sequence substantially as set forth in SEQ ID NO:1 or a derivative, homolog or mimetic thereof or capable of hybridizing to SEQ ID NO:1 under low stringency conditions or a derivative, homolog, analog, chemical equivalent or mimetic of said nucleic acid molecule.

6. (Amended) An isolated nucleic acid molecule according to claim [1] 2 wherein said protein has the characteristics of Csl or a functional equivalent thereof.

7. (Amended) An isolated nucleic acid molecule according to claim [1] 2 wherein said protein comprises the amino acid sequence substantially as set forth in SEQ ID NO:4 [or a derivative, homolog or mimetic thereof or having at least about 45% or greater similarity to SEQ ID NO:4 or a derivative, homolog, analog, chemical equivalent or mimetic of said nucleic acid molecule].

8. (Amended) An isolated nucleic acid molecule according to claim [1] 2 comprising a nucleotide sequence substantially as set forth in SEQ ID NO:3 [or a derivative, homolog or mimetic thereof or capable of hybridizing to SEQ ID NO:3 under low stringency conditions or a derivative, homolog, analog, chemical equivalent or mimetic of said nucleic acid molecule].

11. (Amended) An isolated nucleic acid molecule according to claim [1] 2 wherein said protein comprises the amino acid sequence substantially as set forth in SEQ ID NO:5 [or a derivative, homolog or mimetic thereof or having at least about 45% or greater similarity to SEQ ID NO:5 or a derivative, homolog, analog, chemical equivalent or mimetic of said nucleic acid molecule].

12. (Amended) An isolated nucleic acid molecule according to claim [1] 2 comprising a nucleotide sequence comprising exon regions of which five comprise:

Exon 1 comprising a nucleotide sequence corresponding to the nucleotide sequence substantially as set forth in SEQ ID NO:6;

Exon 2 comprising a nucleotide sequence corresponding to the nucleotide sequence substantially as set forth in SEQ ID NO:7;

Exon 3 comprising a nucleotide sequence corresponding to the nucleotide sequence substantially as set forth in SEQ ID NO:8;

Exon 4 comprising a nucleotide sequence corresponding to the nucleotide sequence substantially as set forth in SEQ ID NO:9; and

Exon 5 comprising a nucleotide sequence corresponding to the nucleotide sequence substantially as set forth in SEQ ID NO:10,

or capable of hybridizing to a genomic sequence comprising said exon regions under low stringency conditions or a derivative, homolog, analog, chemical equivalent or mimetic of said nucleic acid molecule.

16. (Amended) An isolated protein [according to claim 15] comprising an amino acid sequence substantially as set forth in SEQ ID NO:2 or a derivative, homolog or mimetic thereof

or having at least about 45% or greater similarity to SEQ ID NO:2 or a derivative, homolog, analog, chemical equivalent or mimetic of said protein.

17. (Amended) An isolated protein according to claim [15] 16 encoded by a nucleotide sequence substantially as set forth in SEQ ID NO:1 or a derivative, homolog or mimetic thereof or capable of hybridizing to SEQ ID NO:1 under low stringency conditions or a derivative, homolog, analog, chemical equivalent or mimetic of said protein.

19. (Amended) An isolated protein according to claim [15] 16 wherein said protein has the characteristics of Csl or a functional equivalent thereof.

20. (Amended) An isolated protein according to claim [15] 16 comprising an amino acid sequence substantially as set forth in SEQ ID NO:4 [or a derivative, homolog or mimetic thereof or having at least about 45% or greater similarity to SEQ ID NO:2 or a derivative, homolog, analog, chemical equivalent or mimetic of said protein].

21. (Amended) An isolated protein according to claim [15] 16 encoded by a nucleotide sequence substantially as set forth in SEQ ID NO:3 [or a derivative, homolog or mimetic thereof or having at least about 45% or greater similarity to SEQ ID NO:2 or a derivative, homolog, analog, chemical equivalent or mimetic of said protein].

22. (Amended) An isolated protein according to claim [15] 16 encoded by a nucleotide sequence comprising exon regions of which five comprise:

Exon 1 comprising a nucleotide sequence corresponding to the nucleotide sequence substantially as set forth in SEQ ID NO:6;

Exon 2 comprising a nucleotide sequence corresponding to the nucleotide sequence substantially as set forth in SEQ ID NO:7;

Exon 3 comprising a nucleotide sequence corresponding to the nucleotide sequence substantially as set forth in SEQ ID NO:8;

Exon 4 comprising a nucleotide sequence corresponding to the nucleotide sequence substantially as set forth in SEQ ID NO:9; and

Exon 5 comprising a nucleotide sequence corresponding to the nucleotide sequence substantially as set forth in SEQ ID NO:10,

or capable of hybridizing to a genomic sequence comprising said exon regions under low stringency conditions or a derivative, homolog, analog, chemical equivalent or mimetic of said protein.

25. (Amended) An isolated protein according to claim [15] 16 comprising an amino acid sequence substantially as set forth in SEQ ID NO:5 [or a derivative, homolog or mimetic thereof or having at least about 45% or greater similarity to SEQ ID NO:5 or a derivative, homolog, analog, chemical equivalent or mimetic of said protein].

26. (Amended) An isolated protein according to claim [15] 16 which protein is a homodimer.

27. (Amended) An isolated protein according to claim [15] 16 which protein is a heterodimer.

31. (Amended) A method of modulating muscle cell functional activity in a mammal, said method comprising administering to said mammal an effective amount of a protein according to claim [15] 16 or a derivative, homolog, analog, chemical equivalent or mimetic thereof for a time and under conditions sufficient to modulate the functional activity of said muscle cell.

34. (Amended) A method of modulating muscle cell functional activity in a mammal, said method comprising administering to said mammal an effective amount of a nucleic acid molecule according to claim [1] 2 or a derivative, homolog, analog, chemical equivalent or mimetic thereof for a time and under conditions sufficient to modulate the functional activity of said muscle cell.

37. (Amended) A method of modulating cellular functional activity in a mammal, said method comprising administering to said mammal an effective amount of a protein according to claim [15] 16 or a derivative, homolog, analog, chemical equivalent or mimetic thereof for a time and under conditions sufficient to modulate the activity of one or more components of the calcineurin-dependent signaling pathway.

40. (Amended) A method of modulating cellular functional activity in a mammal, said method comprising administering to said mammal an effective amount of a protein according to claim [1] 2 or a derivative, homolog, analog, chemical equivalent or mimetic thereof for a time and under conditions sufficient to modulate the activity of one or more components of the calcineurin-dependent signaling pathway.

48. (Amended) A method of treating a mammal, said method comprising administering to said mammal an effective amount of a protein according to claim [15] 16 or a derivative, homolog, analog, chemical equivalent or mimetic thereof for a time and under conditions sufficient to modulate muscle cell functional activity.

49. (Amended) A method of treating a mammal, said method comprising administering to said mammal an effective amount of a nucleic acid molecule according to claim [1] 2 or a derivative, homolog, analog, chemical equivalent or mimetic thereof for a time and under conditions sufficient to modulate muscle cell functional activity.

59. (Amended) An isolated antibody directed to the protein according to claim [15] 16.

60. (Amended) An isolated antibody directed to the nucleic acid molecule according to claim [1] 2.